STORM WATER POLLUTION PREVENTION PLAN

PREPARED FOR:

HERCULES

CHEMICAL SPECIALTIES

HATTIESBURG, MISSISSIPPI
FORREST COUNTY

APRIL 1996

PREPARED BY:

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1.0
SWPPP CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

HERCULES INCORPORATED

Signature

4/15/96
Date

GERALD BURCH
Print Name

PLANT MANAGER
Title

2.0 SWPPP OVERVIEW

2.1 GENERAL

Federal regulations (40 CFR Parts 122, 123 and 124) require preparation of a permit application for storm water discharges associated with "industrial activities" in accordance with the National Pollutant Discharge Elimination System (NPDES). Regulated industrial activities and facilities are identified by two means: Standard Industrial Classification (SIC) codes or by specific description of the covered industry or activity. The Hercules Incorporated (Hercules) chemical plant located at 613 West Seventh Street in Hattiesburg, Mississippi is classified under SIC Code 2861, which is identified for coverage by the Federal regulations cited above. The Hercules facility is also subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA).

A portion of storm water and treated wastewater discharged form the Hercules site is currently covered under NPDES Permit Number MS0001830, which expires on October 21, 1996. Hercules is applying for a State of Mississippi SARA Title III, Section 313 Storm Water General NPDES Permit (General Permit) for coverage of storm water upon expiration of the current NPDES permit.

This Storm Water Pollution Prevention Plan (SWPPP) is being submitted to fulfill the requirements set forth in the Environmental Protection Agency (EPA) storm water guidelines for industrial permit application and the General Permit. This SWPPP was prepared in accordance with the guidelines presented in the *Mississippi SWPPP Guidance Manual for Industrial Facilities*, prepared by the Mississippi Department of Environmental Quality (MDEQ). A SARA Notice of Intent (SNOI) is being submitted to the MDEQ separately, as required by the General Permit.

2.2 SWPPP OBJECTIVES

The EPA published regulations in November of 1990 to control storm water discharges under the NPDES program. The goal of the storm water program was to improve water quality by reducing the amount of pollutants contained in storm water runoff from industrial sites. Industrial facilities subject to an NPDES storm water discharge permit must prepare and implement a SWPPP.

The objectives of this SWPPP are to:

- Identify potential sources of pollution which may affect the quality of storm water discharges;
- Describe best management practices (BMPs) and control measures intended to minimize the pollutants in the facility's runoff; and

- Provide practical guidance for implementing the SWPPP and complying with the terms and conditions of the General Permit.

2.3 SWPPP ELEMENTS

In order to meet the requirements of the terms and conditions of the General Permit, this SWPPP contains the following elements:

- Description of Potential Pollutant Sources. This SWPPP includes a site map, a topographic map, a narrative description of significant materials exposed to storm water, provisions for an updated list of significant spills, predictions of surface water flow direction and the pollutants which may be present in the discharges, and provisions for an updated summary of sampling data.

- Storm Water Management Controls. The SWPPP addresses the various controls necessary for preventing the potential pollutants from affecting the storm water discharge.

- Site Inspection and Recordkeeping Provisions. The SWPPP discusses the requirements for implementing and complying with site inspection and recordkeeping requirements.

- SARA Title III, Section 313 Requirements. The SWPPP describes measures taken at the site to conform with applicable guidelines for SARA facilities established in the General Permit.

These elements are described in the following sections.

3.0 SITE INFORMATION

3.1 GENERAL INFORMATION

Facility Name:	Hercules Incorporated
Site Address:	613 West Seventh Street Hattiesburg, Mississippi 39401
Mailing Address:	P.O. Box 1937 Hattiesburg, Mississippi 39401
County:	Forrest
Facility Contact: Phone:	Mr. Charles Jordan (601) 545-3450
Facility Manager:	Mr. Gerald Burch
Facility Owner/Operator:	Hercules, Incorporated
Primary SIC Code:	2861 (Gum and Wood Chemicals)
Designated Pollution Prevention Manager:	Mr. Charles Jordan

3.2 SITE DESCRIPTION

The Hercules site covers approximately 200-acres in a commercial/residential area in northern Hattiesburg (Figure 1). The facility, which has been active since 1920, is primarily involved in the production of resins and paper chemicals derived from imported pine rosin. The majority of industrial areas where significant materials are handled, processed, and stored are located in the southern and eastern portions of the site. The northern and western portions of the site are generally undeveloped and vegetated, and very few industrial activities occur in these areas. A site plan illustrating industrial areas and storm water-related features is included as Figure 2.

The Hercules site is generally surrounded by commercial properties to the north and east, and residential areas to the south and west. A cemetery and an industrial plant is located adjacent to the southwestern portion of the site. A perennial eastward-flowing stream, Greens Creek, transects the Hercules site. Once Greens Creek exits the site, it trends northward and discharges into the Bowie River approximately one-half mile north of the site. Two intermittent, northward-flowing tributaries originate southwest of the Hercules facility and extend across the undeveloped (western) portion of the site to Greens Creek.

The primary access for tanker trucks and other vehicles is at the southern portion of the site along West Seventh Street. A manned guard house is located at this entrance. The Main Office Building is located along West Seventh Street, and employee parking is located across the street from this building. Another site access road is located along the eastern property boundary on Providence Street. A system of Illinois Central Gulf railroad spurs exist within the Hercules facility (see Figure 2), accessing loading/unloading areas at the different material storage and transfer areas. The two rail access points are located near the northeastern and southwestern corners of the site.

All of the process areas at the Hercules site and the majority of the loading/unloading and material storage areas are surfaced with concrete and curbed. Liquids including rainwater and any liquid spills or leaks which accumulate within these contained areas are conveyed through a series of drains into one of seven area sumps, and pumped underground to the impounding basin for treatment (see Figure 2). The total contained area is approximately 20 acres (see shaded area in Figure 2). The bulk storage areas located outside the process areas are surrounded by earthen berms. Storm water which accumulates within these areas is checked periodically and manually released (as needed) to the treatment system, or in some cases, to storm water conveyances.

Separate process areas are identified on Figure 2. These areas include numerous buildings of various size and material, storage tanks (both active and inactive), and a wide range of plant production hardware. In the past few years, the site has reduced operations and closed many process and storage areas. Numerous buildings and structures have been demolished in recent years, and some process areas await demolition. The roadways through the process areas at the site are surfaced with asphalt pavement; whereas, those through the undeveloped areas are composed of gravel.

3.3 STORM WATER OUTFALLS

Two discharge points, or "outfalls", are permitted under Wastewater NPDES Permit MS0001830. Discharge from Outfall 001 includes treated wastewater and storm water originating from within the curbed process areas at the facility (approximately 20 acres). Outfall 002 includes discharge from Outfall 001 and other storm water runoff from a portion of the facility representing approximately 18 acres, plus some non-contact cooling water. Other than these areas, storm water runoff exits the Hercules facility at five additional outfalls. These outfalls, SW001 through SW005, are shown on Figure 2, and are described in the following paragraphs. Drainage basins for each outfall are outlined on Figure 3.

3.3.1 OUTFALL SW001

Outfall SW001 is located near the main entrance to the site along the southern site boundary. This outfall's drainage basin represents approximately 1.2 acres, and includes the main access road for vehicles, the primary Illinois Central Gulf railroad spur, the main office building, and numerous covered shops. The outfall is an earthen ditch which discharges into a eastward-flowing ditch along West Seventh Street.

3.3.2 OUTFALL SW002

Outfall SW002 is located just west of SW001, and receives runoff from the railroad spur; the fueling area for Hercules' vehicles, machinery; the mobile equipment storage area; and numerous buildings. The Outfall SW002 drainage basin covers approximately 7.0 acres, and the discharge point is an earthen ditch which is received by the eastward-flowing ditch along West Seventh Street.

3.3.3 OUTFALL SW003

Outfall SW003 is located where Greens Creek exits the facility near the northeastern corner of the property. This outfall point receives runoff from the entire undeveloped area in the western portion of the site, uncontained areas surrounding the Neuphor process plant, and the area in the vicinity of the rosin pits. Greens Creek is a perennial stream and its watershed represents over 1,000 acres, of which approximately 103 are located on the western Hercules property. The fraction of flow through Outfall SW003 originating from the site during a storm event is negligible.

3.3.4 OUTFALL SW004

The discharge point for SW004 is located near the northeastern corner of the Hercules site, east of SW003. The SW004 drainage basin represents approximately 16 acres, and receives runoff from the primary railroad spur and uncontained areas surrounding numerous process areas and loading/unloading areas. This unnamed, intermittent tributary

trends northeastward after exiting the Hercules site, discharging into the Bowie River approximately one-half mile northeast of the site.

3.3.5 OUTFALL SW005

Outfall SW005 is located along the eastern property boundary, and receives runoff from uncontained areas surrounding the hard resins process area, loading/unloading areas, and numerous buildings. The drainage basin for this outfall covers approximately 1.7 acres.

4.0 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The following sections identify and describe all activities and significant materials which could potentially pollute storm water discharges at the Hercules site.

4.1 TOPOGRAPHIC MAP

Figure 1 is a topographic map showing the area in which the Hercules facility is located. The property boundary of the site is outlined, and the map extends at least one-quarter mile beyond the boundary.

4.2 SITE MAPS

Figure 2 is a detailed site map showing the locations of the five storm water oufalls (SW001 through SW005), along with other storm water-related features. Figure 3 depicts the onsite drainage areas for each of the storm water outfalls. The following items are included on the site maps (Figures 2 and 3):

- Property boundaries and buildings;
- Exposed significant materials;
- Locations of past, major spills and leaks;
- Exposed equipment maintenance and cleaning areas;
- Treatment, storage and waste disposal areas;
- Fueling stations;
- Liquid storage tanks;
- Loading and unloading areas; and
- Processing and storage areas.

4.3 NARRATIVE DESCRIPTION OF SIGNIFICANT MATERIALS

As required by the General Permit, this section provides a narrative description of significant materials at the Hercules site. A full list of BMPs developed for the Hercules site designed to reduce the potential for storm water contamination is included in Attachment A. Numerous chemicals are used at the Hercules site, many of which are stored, handled, or transported outdoors. Rather than list each chemical used at the site, the following paragraph will focus on the process areas where groups of chemicals, raw materials, products, and by-products are used, stored, and handled. SARA Section 313 chemicals stored at the site are listed in Table 1. Material Safety Data Sheets (MSDS) for each chemical used or stored at the Hercules facility are located in the main office building and in the appropriate operating area.

Individual process and other industrial areas at the Hercules site are illustrated on Figure 2, and include: the Staybelite and Foral areas, the Pilot Plant, the Synthetic Resins area, the Defoamer Paracol area, the Kymeme area, the Rosin Amine areas, the Hydroperoxides

area, and the Neuphor area. Designated loading/unloading areas for raw materials, products, and by-products are also noted on Figure 2. All storm water which accumulates within the process areas and loading/unloading areas (along with potential spills or leaks) is contained, treated, and released through permitted NPDES Outfall 001. The sumps located at each process area are designed such that spills flowing through them will be recovered and returned to the systems. Spills that could potentially pass through the sumps are recovered in the main impounding basin.

Structural storm water controls at the Hercules facility include: the concrete curbing around the process, materials storage, and loading/unloading areas to contain storm water and potential leaks/spills; earthen berms around bulk storage areas; roofing over some process areas and material storage areas to prevent contact with rainfall; concrete and asphalt paving along roads and other vehicle traffic areas to prevent soil erosion; underground drain lines and culverts to convey storm water below roads and other structures; earthen and concrete drainage ditches to collect and convey storm water runoff; and catch basins to divert storm water to below-ground conveyances. Drainage valves are present on drainage pipes within the dikes surrounding the bulk storage tanks. The valves remain closed, but are opened periodically to release uncontaminated storm water. Grass is present within most of the earthen channels and swales at the site to minimize erosion and reduce suspended sediments in storm water runoff.

Non-structural controls that have been implemented at the Hercules site to improve the quality of storm water runoff include: assigning a Pollution Prevention Manager (see Section 5.1); employee training (Section 5.7); testing storm water conveyances for non-storm water or "illicit" connections (Section 5.8); routine site inspections and annual evaluation of the SWPPP (Section 5.9); and the development and implementation of a site-specific Spill Prevention Control and Countermeasure (SPCC) Plan. The SPCC Plan outlines standard operating procedures to minimize the potential for spills or leaks, and provides response procedures in the event of a spill. The storm water program will be integrated into Hercules' existing environmental programs, including: hazard communication; preventive maintenance; spill control; emergency response; health and safety; and waste minimization.

Process wastewater and captured storm water is treated in the onsite treatment system. The primary treatment system consists of a sedimentation chamber, a dissolved air flotation system, and a skimmer (see impounding basin in Figure 2). Treated water from the primary system is held in a large storage tank located west of Providence Street prior to final treatment. The secondary system is located north of the impounding basin and consists of three large carbon absorption towers. The treated wastewater is discharged through Outfall 001 and into the Outfall 002 drainageway adjacent to the impounding basin. This discharge is covered under NPDES permit number MS0001830.

Hazardous wastes produced at the facility are stored in a designated covered, enclosed building. These wastes are periodically picked-up by a commercial transporter for offsite treatment and/or disposal. Non-hazardous process wastes are stored in 55-gallon drums

in a contained area near the northeastern portion of the site (see Figure 2). Empty metal resin containers are temporarily stored in the undeveloped portion of the facility. These containers are periodically picked-up by an outside company for scrap metal. Other solid wastes from the site (boxes, office paper, etc.) are disposed in numerous dumpsters located around the site, and these wastes are periodically picked-up by a waste disposal company for landfill disposal. It was a common practice at Hercules in the past to place rosins into below-ground pits for long-term storage. These rosin pits are located in the northern portion of the site.

Various machinery is used at the Hercules facility to aid in loading, unloading, and moving materials. The fueling area for vehicles and machinery is located in the southern portion of the site. The gasoline and diesel (one each) fuel tanks are located within secondary containment, and the fueling point is adjacent to the eastern containment wall. Two wash racks are located just northeast of the fueling area. Vehicles, machinery, and other equipment are washed at the wash rack near the auto shop, and rail cars are cleaned at the wash rack constructed below a railroad spur. Drainage from both wash racks is conveyed to the wastewater treatment system.

Domestic sewage from the Hercules site is discharged into the City sewage system. Common fertilizers (e.g., Round-Up$_{TM}$) are periodically applied along fence rows at the site by Hercules personnel and local certified contractors. Common fertilizers are occasionally applied to grasses at the facility, particularly in front of the main office building along West Seventh Street. Pesticides or other soil conditioners are not used at the Hercules site.

4.4 SIGNIFICANT SPILLS OR LEAKS

Within the last five years, there have been several releases of significant materials to the facility wastewater treatment system that were contained onsite. Some releases may have escaped offsite through the facility storm water sewer system at Outfall SW004. The reported releases include:

Date	Material Released including Amount and Location of Release
8-16-91	Polypale Area- Dowtherm (27% byphenyl)- 10 gallons were released and either treated by the facility wastewater treatment system or discharged through Outfall 002.
9-06-91	Polypale Area- Dowtherm- 10 pounds were released and either treated by the facility wastewater treatment system or discharged through Outfall 002.
9-09-92	Polypale Area- Dowtherm- 10 pounds were released and either treated by the facility wastewater treatment system or discharged through Outfall 002.

9-10-92 Polypale Area- Dowtherm- 10 pounds were released and either treated by the facility wastewater treatment system or discharged through Outfall 002.

10-15-92 Hard Resins Area- Dowtherm- 10 pounds were released and either treated by the facility wastewater treatment system or discharged through Outfall 002.

3-03-93 Resin Amide Derivative (RAD) Area- Terpene (para-cymene)- 50 gallons escaped off-site through the storm water sewer system at Outfall SW004. Hercules personnel conducted clean-up efforts in the drainage ditch downstream from Outfall SW004.

5-04-95 RAD Area- Dowtherm- 10 pounds were released and either treated by the facility wastewater treatment system or discharged through Outfall SW004.

All of the releases to Outfall 002 were covered under the existing NPDES permit number MS0001830. Any significant spills or leaks of toxic or hazardous pollutants which occur at the Hercules site after the effective date of the facility's General Permit will be recorded, as outlined in Section 5.6.

4.5 FLOW PREDICTION AND POTENTIAL POLLUTANTS

All ditches and other storm water conveyances are illustrated on Figure 3, along the arrows indicating flow direction. The predicted direction of sheet flow on the site is also shown, and the individual drainage area for each storm water outfall is outlined (each storm water outfall is described in Section 3.3).

The majority of spills at the facility occur within contained areas (process or loading/unloading areas) and are captured and diverted to the onsite wastewater treatment system. It is not practical to list all the chemicals stored at the Hercules facility; however, the SARA Section 313 chemicals stored at the site are listed in Table 1. The individual process and loading/unloading areas are illustrated on Figure 3, which also illustrates the predicted flow direction from each potential source area. Chemicals released into storm water conveyances within the last five years are listed in Section 4.4.

4.6 SAMPLING DATA SUMMARY

Outfalls 001 and 002 at the Hercules site are currently permitted under a wastewater NPDES Permit. These outfalls are sampled three times per week, and the monitoring reports are submitted to the MDEQ. To date, storm water sampling has not been performed in storm water outfalls SW001 through SW005.

5.0 STORM WATER MANAGEMENT CONTROLS

5.1 POLLUTION PREVENTION MANAGER

The Pollution Prevention Manager at the Hercules facility is **Mr. Charles Jordan**. His responsibilities include: development and implementation of SWPPP; training of site personnel (Section 5.7); conducting storm water site inspections (Section 5.9.1); evaluation of the SWPPP (Section 5.9.2); and, if necessary, modification of the SWPPP (Section 10.0).

5.2 RISK IDENTIFICATION/ASSESSMENT AND MATERIAL INVENTORY

As previously stated, any liquid spills in processing or loading/unloading areas are contained by concrete curbing, and these liquids (along with storm water which accumulates) are conveyed to the wastewater treatment system. Most of the bulk storage tanks outside of the process areas are empty, but all are surrounded by earthen dikes to capture a potential spill. The fueling area for vehicles and machinery at the site is uncovered and uncontained (see Figure 2). The implementation of standard operating procedures in the facility's SPCC Plan help to minimize the potential for a leak or spill.

Although many toxic and hazardous chemical compounds are stored and used at the Hercules plant, the existing storm water structural controls at the site present a relatively low risk for the release of such compounds to storm water runoff. A list of significant spills/leaks at the facility in the last five years is included in Section 4.4. In most cases, the spilled chemicals were recovered and treated in the wastewater treatment system. Some of the chemical releases at the site are in a gaseous phases, which would have little or no effect on the quality of storm water.

5.3 SEDIMENT AND EROSION PREVENTION

No areas were identified during the site visit which exhibited a high potential for soil erosion. All process areas, major roadways, and other high-traffic areas are covered with pavement. Minor roadways throughout the western portion of the site are surfaced with gravel. Undeveloped areas are well covered with indigenous grasses and other vegetation. Most of the earthen ditches are grassed which minimizes erosion and sedimentation. Sediments are removed from storm water which enters the impounding basin (wastewater outfall 001).

5.4 PREVENTIVE MAINTENANCE

The Hercules facility currently implements a preventive maintenance program for the purpose of assessing and maintaining storm water management devices and plant equipment capable of causing a release of a significant material. The goal of the program

is to preclude breakdown or failure of equipment that would cause pollution to reach the storm water conveyance system.

Site personnel have been trained to identify any equipment, systems, pipes, pumps, storage tanks, pressure vessels, pressure release valves, process and material handling equipment, and storm water management devices that may be faulty and capable of causing a release. Site inspections are conducted as needed to check source areas for potential problems (Section 5.9). Specific BMPs relating to the facility's preventive maintenance program are included in Attachment A. Tank testing procedures are described in Section 6.2.

5.5 GOOD HOUSEKEEPING

Good housekeeping practices are intended to keep the facility clean and orderly, thus minimizing the potential for contribution of pollutants to storm water runoff. Routine good housekeeping BMPs for the Hercules facility are included in Attachment A.

5.6 SPILL PREVENTION AND RESPONSE PROCEDURES

The process and storage areas where spills would most likely occur are shown on Figure 3, as well as the predicted flow direction of a release. Spill prevention and response procedures are outlined in the facility's SPCC Plan. This plan is currently being implemented to minimize the potential for a spill, and will be used in the event of a spill. In general, the SPCC Plan includes: a description of the facility's storage tanks and associated control devices; operating procedures for pipe line transfers and loading/unloading; guidelines for inspections and records; security measures; personnel training and responsibility; and countermeasure procedures in the event of a spill. A copy of the SPCC Plan is available in the Pollution Prevention Manager's office in the main office building.

Significant spills or leaks which could potentially occur in the future will be reported to the proper authorities in accordance with federal regulations. In this event, an evaluation of site operations and procedures involved in the spill will be made and, if appropriate, the SWPPP will be modified accordingly (see Section 5.10). Information regarding any significant spills will be recorded at the site. This information will include, as appropriate:

- Date of spill;
- Duration of spill;
- Cause of spill;
- Environmental problems created by the spill;
- Response procedures;
- Parties notified;
- Recommended revisions to the SWPPP and operating procedures; and
- Equipment needed to prevent recurrence.

5.7 EMPLOYEE TRAINING

Effective management of storm water pollution will require all facility staff to be familiar with those conditions that may cause pollution. Furthermore, day-to-day implementation of BMPs by all employees is essential for the success of this SWPPP. The Pollution Prevention Manager will be responsible for implementation of the guidelines established in this SWPPP.

Storm water training will be conducted on an **annual** basis at the Hercules facility, and the information will be reviewed with appropriate new employees during their employment orientation. Training topics will consist of: 1) spill prevention and response, 2) good housekeeping practices, 3) material management practices, and 4) other general BMPs. The SWPPP training will be conducted to all employees which are associated with outdoor industrial activities. Regular feedback regarding the implementation and maintenance of storm water management practices will be obtained from operations staff by the Pollution Prevention Manager.

5.8 TESTING FOR ILLICIT CONNECTIONS/CERTIFICATION

5.8.1 Potential Non-Storm Water Discharges

Federal law and the General Permit prohibit almost all non-storm water discharges unless specifically permitted under an NPDES permit. On April 3, 1996, dry weather observation for non-storm water discharges was conducted at the Hercules facility. As previously stated, wastewater is currently being discharged through NPDES-permitted Outfalls 001 and 002 (not part of this SWPPP). Non-storm water connections were not observed in the SW001, SW002, SW003, SW004, or SW005 drainage basins.

5.8.2 Certification

As **required** by the General Permit, a Non-Storm Water Discharge Evaluation and Certification is included in this SWPPP (see Attachment B). This form summarizes the methods and results of the evaluation, and has been certified by an appropriate Hercules representative.

5.9 VISUAL SITE INSPECTIONS

5.9.1 Routine Inspections

The responsible designee should perform visual site inspections at the Hercules site as often as needed to adequately monitor the effectiveness of the SWPPP. A Checklist of BMPs is included in Attachment A to facilitate routine inspections. A determination should be made whether the BMPs established in the SWPPP are being implemented and

are adequately minimizing pollutants in storm water runoff. If possible, the routine inspections should be conducted following a rain event.

5.9.2 Annual Site Evaluation

In addition to the routine visual inspections, the General Permit **requires** that a comprehensive site compliance evaluation be conducted at least **annually**. The objective of the evaluation is to assess the overall effectiveness of the SWPPP and to modify or improve the SWPPP, as appropriate.

Accordingly, the annual compliance evaluation of the facility will address the following elements:

- Modify or update the site map to reflect current conditions;
- Verify and update potential pollutant sources;
- Inspect outfalls for evidence of pollutants entering the drainage system and adversely impacting the receiving water body;
- Verify that source and structural controls have been implemented, and are effective in controlling storm water pollution;
- Identify if improvements or additional control measures are needed;
- Inspect the condition of any spill response equipment; and
- Inspect potential non-storm water discharges.

The annual site evaluation will be conducted by the responsible designee. The routine visual inspections should be scheduled at different times of the year than this comprehensive site evaluation, and results of the visual inspections will be taken into consideration during the annual evaluation process.

Information obtained during the annual site evaluations will be recorded on copies of the Inspection Report and Certification Form for SWPPP Evaluation, included in Attachment C. This information includes:

- Date and time of the site evaluation;
- Name of the inspector(s);
- Date and amount (inches) of last rainfall;
- Deficiencies noted during the inspection;
- Corrective action needed; and
- Certification as to whether or not pollution control measures are adequate and have been implemented and properly maintained.

The Inspection Report and Certification Form for SWPPP Evaluation will be submitted to the MDEQ **annually**, as discussed in Section 5.11.

5.10 MODIFICATIONS TO THE SWPPP

The SWPPP will be modified 1) to reflect changes in design, construction, operation, or maintenance at the Hercules Site which may increase the discharge of pollutants to storm waters, 2) if it is determined by the Pollution Prevention Manager that the SWPPP is ineffective in controlling storm water pollutants, or 3) to address MDEQ-requested changes to the SWPPP. If modifications to the SWPPP are deemed necessary, the plan will be revised to incorporate the modifications, and applicable pages of the old SWPPP will be replaced. Each page, figure, and table in the SWPPP will be dated to keep a record of modifications.

Modifications to the SWPPP as requested by the MDEQ will be made within **30 days of notification**, and Hercules will certify in writing to the MDEQ that the requested changes have been made. Otherwise, any modifications to the SWPPP will be submitted to the MDEQ within **30 days after amendment**. Information regarding modification(s) to the SWPPP will be recorded on the form included in Attachment D. This information will include: date of amendment; reason for amendment; a listing of any pages, tables, figures, or attachments involved in the amendment; and a re-certification of the modifications to the SWPPP by the appropriate Hercules representative.

5.11 REPORTING

The Inspection Report and Certification Form for SWPPP Evaluation (Attachment C) will be submitted **annually** postmarked no later than the **28th day of January**. Report forms will be submitted to the MDEQ at the following address (next page):

Chief, Industrial Wastewater Branch
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385

5.12 RECORDKEEPING

Records obtained during the annual site evaluations will be retained by Hercules for a minimum of **three years** after date of inspection. The responsible designee will be responsible for recordkeeping procedures.

6.0 ADDITIONAL REQUIREMENTS FOR SARA-SECTION 313 FACILITIES

6.1 PREVENTIVE SYSTEMS

In areas where Section 313 chemicals are stored, processed, or handled, appropriate containment and drainage control structures exist to contain a potential spill (see Figure 3). Any spills (as well as rainwater which accumulates) are contained by concrete dikes surrounding these areas, and liquids are conveyed to the facility's wastewater treatment system. Bulk storage tanks located away from the operation areas are surrounded by earthen dikes. Drainage valves within these dikes remained closed, unless uncontaminated storm water is being manually released.

6.2 COMPATIBILITY OF TANKS AND SPILL PREVENTION

All storage tanks and containers for Section 313 chemicals at the Hercules facility are compatible with the material stored and conditions of storage (e.g., pressure, temperature). Tanks are inspected frequently by operating personnel for signs of leakage or deterioration. Corrective action is initiated when such signs are indicated.

Tanks, foundations, and dikes are periodically inspected and tested by area supervisory and maintenance personnel. Testing is conducted at least once every three years and may include: pressure testing, hydrostatic testing, visual inspection, and non-destructive procedures where appropriate. The integrity testing records are kept by the responsible designee.

6.3 NON-LIQUID MATERIAL STORAGE AREAS

All Section 313 chemicals are stored within containment areas, and any spills would be captured. Hazardous wastes generated at the facility are stored within a covered, enclosed building. Non-hazardous process wastes are stored in 55-gallon drums in a contained area near the northeastern portion of the site (see Figure 2). Storm water drainage from this storage area is treated and released through wastewater Outfall 001.

6.4 TRUCK AND RAILCAR LOADING/UNLOADING AREAS

All truck and railcar loading/unloading areas for Section 313 chemicals are located within contained areas. During materials transfer, a sign is placed in front of all trucks and railcars. The trucks and railcars are chocked to prevent movement until it has been determined that all hoses and pipes have been disconnected and all drains and closures have been tightly closed. System hardware and tanks associated with the loading/unloading areas are inspected periodically as part of Hercules' preventive maintenance program. Other details associated with loading/unloading operations are available in the facility's SPCC Plan.

6.5 MATERIALS HANDLING EQUIPMENT DESIGN

In areas where Section 313 water priority chemicals are transferred, processed, or otherwise handled, piping, and processing/handling equipment is designed and operated so as to prevent discharge of Section 313 chemicals. Materials used in piping and other hardware and equipment which come in contact with these chemicals are compatible with the substances. Drainage from the process/handling areas are contained, and any storm water which accumulates in these areas is conveyed to the wastewater treatment system. Roofing, enclosure, or other guards exists is some of the process/handling areas to minimizing spraying and exposure of potential source areas to wind.

6.6 DISCHARGES FROM CONTAINED AREAS

All Section 313 chemicals are stored within containment areas, and any spills would be captured. The sumps associated with each process area are designed such that spills flowing through them will be recovered and returned to the systems. Spills that could potentially pass through the sumps are recovered in the main impounding basin by a skimmer. Earthen dikes surround bulk storage tanks away from the process areas, and drainage valves present within the dikes are manually opened periodically to release uncontaminated storm water. These valves are of the "open-and-close" design. "Flapper-type" drainage valves are not used in the storm water structural control systems at the Hercules site.

As required by the General Permit, records will be kept of the frequency and estimated volume (in gallons) of discharges from the containment areas to the drainage basins for storm water Outfalls SW001 through SW005 (not for wastewater Outfalls 001 and 002). The information will be recorded on the forms provided in Attachment E, and will include: date of discharge; estimated volume of discharge; containment area from which discharge originated; storm water drainage basin affected; documentation that discharge appeared clean (no sheen or odor) prior to discharge and that valve was manually closed following discharge; personnel performing discharge; and a signature.

6.7 PREVENTIVE MAINTENANCE/HOUSEKEEPING

All applicable areas of the Hercules facility will be inspected for leaks or conditions that could lead to discharges of Section 313 chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials, or products. Such potential occurrences will be monitored during the routine site inspections which are conducted as often as needed by the responsible designee (see Section 5.9.1), and during the site evaluation inspections (Section 5.9.2) which are conducted at least annually. A Checklist of BMPs used during the inspections, which includes inspection procedures and general housekeeping guidelines, is included in Attachment A.

As part of the Hercules' standard operating procedures, integrity testing of materials storage and handling hardware is performed periodically. Testing is conducted at least

once every three years and may include: pressure testing, hydrostatic testing, visual inspection, and non-destructive procedures where appropriate. The integrity testing records are kept by the responsible designee.

6.8 SECURITY

The Hercules plant has established and implemented a security system to prevent accidental or intentional entry which could cause a discharge. Components of the security system are described below.

- The plant area is fenced, and all gates are either locked or guarded.
- Visitors are admitted only by pass to visit a specific person or persons. No unauthorized visitors are allowed.
- The plant fence and non-operating areas are patrolled by supervisory personnel or guards on a frequent scheduled basis.
- Lighting in critical areas is adequate to avoid vandalism and to detect spills.

6.9 TRAINING

Annual employee training regarding the prevention of spills and discharges of Section 313 chemicals is addressed in Section 5.7. Contractor personnel will be trained on a task-by-task basis, depending on the nature of work. Training will be provided by the Pollution Prevention Manager or responsible designee. The responsible designee will also be accountable for spill prevention, setting up emergency procedures, and reporting requirements so that chemical spills and releases can be isolated and contained before discharge.

6.10 ENGINEERING CERTIFICATION

In accordance with the General Permit, the SWPPP has been reviewed and certified by a Registered Professional Engineer, having examined the Hercules facility and attesting that the SWPPP has been prepared in accordance with good engineering practices. The engineering certification is included in Attachment F.

The SWPPP will be reviewed and re-certified **every three years** by a Registered Professional Engineer. Additional certifications will be documented on the form included in Attachment F.

7.0 PERMIT CONDITIONS

7.1 INSPECTIONS

During coverage under the General Permit, all areas at the Hercules facility contributing to storm water discharges associated with industrial activity will be inspected as often as needed, but no less than once **annually**. The inspections will be performed by the responsible designee and will evaluate whether the SWPPP 1) adequately minimizes pollutant loadings, 2) is properly implemented in accordance with the terms of the General Permit, and 3) should include additional control measures. Routine site inspections and annual site evaluations are further defined in Section 5.9.

7.2 NON-NUMERIC LIMITATIONS

In accordance with the SWPPP, storm water discharging from the Hercules site (Outfalls SW001 through SW005) should be free from:

1. Debris, oil, scum, and other floating materials other than in trace amounts;
2. Eroded soils and other materials that will settle to form objectionable deposits in receiving waters;
3. Suspended solids, turbidity, and color at levels inconsistent with the receiving waters; and
4. Chemicals in concentrations that would cause violation of State Water Quality Criteria in the receiving waters.

The non-numeric permit limitations will be assessed during the site inspections.

7.3 MONITORING REQUIREMENTS

During coverage under the General Permit, storm water discharges associated with industrial activity under SARA are subject to the monitoring requirements listed in this Section, **only if an EPA Form R (EPA Form 9350-1), Section 5.3, indicates a release to storm water**. The Hercules facility Form Rs for the most current year do not indicate a release to storm water; therefore, storm water monitoring is not currently required. In the event a release is indicated on future Form R reporting, monitoring will be performed as described below. Regardless of monitoring status at the Hercules storm water outfalls, non-numeric limitation criteria (Section 7.2) will be assessed at each outfall during site inspections.

7.3.1 Frequency of Monitoring and Type of Storm

If monitoring is required for an outfall or outfalls at the Hercules facility based on Form R reporting, sampling will be performed **annually** until Form Rs for the year indicate no release of Section 313 chemicals to storm water. The sampling event(s) will be conducted

on storm(s) greater than 0.1 inches in magnitude, and occurring at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm. If possible, sampling will be conducted early in the year to avoid weather conditions that may prevent sampling.

7.3.2 Parameters

The following parameters will be measured:

- pH;
- Total suspended solids (TSS); and
- Any Section 313 chemical reported on an EPA Form R as being released to storm water.

In addition, the following information will be documented:

- Date and duration (hours) of storm sampled;
- Rainfall measurement (in inches) of storm which generated storm water runoff;
- The duration (hours or days) between the storm sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm; and
- An estimate of total discharge (in gallons) for the storm sampled.

7.3.3 Sample Collection

For each applicable outfall at the Hercules site, **one grab sample** will be collected during the **first thirty minutes** of runoff (or as soon thereafter as practicable), and **one composite sample** will be collected. The composite sample may be either *flow-weighted* or *time-weighted*, and may be collected using an automatic continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour for the first three hours or entire discharge, with each aliquot being separated by a minimum period of fifteen minutes.

7.3.4 Representative Discharge

For two or more outfalls at the Hercules site that require monitoring and that discharge substantially identical effluents, Hercules may opt to sample only one of these outfalls and report that the quantitative data applies to the substantially identical outfall(s). This determination will be made if sampling is required in two or more outfalls at the site during the same year.

7.4 REPORTING

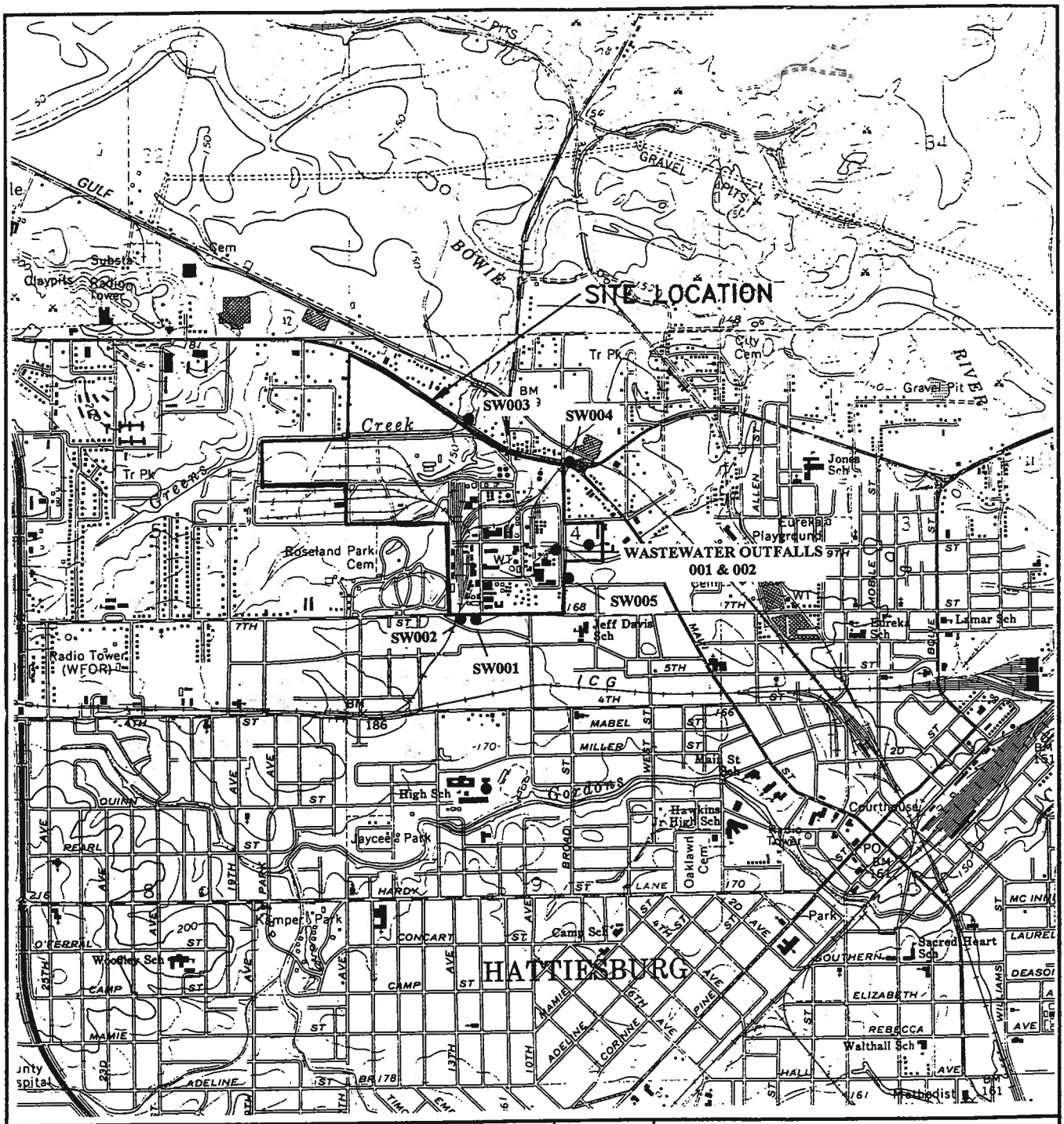
For annual evaluations at the Hercules facility, the Inspection Report and Certification Form for SWPPP Evaluation (Attachment C) will be completed and submitted to the MDEQ along with laboratory data sheet(s) from storm water monitoring performed at the

site (Section 7.3). This information will be submitted to the MDEQ **annually,** postmarked no later than the **28th day of January**, at the following address:

Chief, Industrial Wastewater Branch
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385

TABLE 1
SARA TITLE III, SECTION 313 CHEMICALS STORED AT SITE
HERCULES INCORPORATED
HATTIESBURG, MISSISSIPPI

SARA Section 313 Chemicals Stored at Site	
Ammonia	Epichlorohydrin
Ethylene Glycol	Ethylene Oxide
Maleic Anhydride	Phthalic Anhydride
Sulfuric Acid	Toluene
Xylene	Ethyl Benzene



MISS.

QUADRANGLE LOCATION

SOURCE:
U.S.G.S. 7.5 MINUTE QUADRANGLE MAP,
HATTIESBURG, MISSISSIPPI 1964

HERCULES
CHEMICAL SPECIALTIES

Eco-Systems, Inc.
Environmental Engineers and Scientists

SCALE: 1"=2000'	DRAWN BY: K. SELF	DATE: 12-29-95
	CHKD. BY: MSL	DATE: 4-5-96
PROJECT NO. HER9502	CAD FILE GEOMAP.DWG	

SITE LOCATION 1

ATTACHMENT A

CHECKLIST OF BMPs

CHECKLIST OF BMPs
HERCULES INCORPORATED - HATTIESBURG, MISSISSIPPI

Date: _____ **Time:** _____ **Inspector(s):** _____ **Current Weather Conditions:** _____
Has it rained in last 24 hours? _____ **Which outfalls were flowing? (Circle)** **SW001** **SW002** **SW003** **SW004** **SW005**

BMP OBSERVATIONS:	YES or NO	If YES, Describe Problem	Corrective Actions Taken
Were debris or other obstructions observed in catch basins or culverts which could restrict storm water flow?			
Were loose debris or stray paper observed in drainage areas?			
Were leaks, spills, or other potential contaminant sources observed in production areas that could impact storm water?			
Were solid waste dumpsters at site overflowing with garbage or leaking potential contaminants?			
Were any spills or leaks observed at the fueling area outside containment?			
Were loading/unloading procedures (Section 6.4) being improperly implemented?			
Were any drainage valves in containment areas which could potentially release contaminants to storm water left open?			
Were any containment area sumps not properly operating, or were liquids otherwise escaping from these areas?			
Were any significant materials being stored, handled, or transported in a manner that could lead to a direct release to storm water?			
Was any non-storm water being discharged from the site through a storm water outfall (applicable during dry weather only)?			
Were any security measures at the site not in-place?			

CHECKLIST OF BMPs (CONTINUED)
HERCULES INCORPORATED - HATTIESBURG, MISSISSIPPI

BMP OBSERVATIONS:	YES or NO	If YES, Describe Problem	Corrective Actions Taken
Were any bare earthen areas observed at the site which could be easily eroded?			
Was wastewater treatment system not properly operating?			
Were hazardous wastes being mishandled or stored in a manner that could lead to storm water contamination?			
Were any leaks or spills observed at the non-hazardous waste storage area?			
Were wash racks for railcars and vehicles/equipment not adequately containing liquids during cleaning operations?			
Has any spills or leaks of significant materials occurred in areas that drain to storm water?			
Was the preventive maintenance program not adequate or being improperly implemented?			
Was deterioration of tanks observed, or were other integrity problems noted on any valves, tanks, dikes, foundations, etc.?			
Were manual releases of storm water causing an adverse impact to receiving waters?			
Was any debris, oil, scum, or other floating materials observed in storm water flowing from the site other than in trace amounts?			
Were any eroded soils or other materials observed that could settle to form objectionable deposits in receiving waters?			
Were suspended solids, turbidity, or color in storm water at levels inconsistent with the receiving waters?			

CHECKLIST OF BMPs (CONTINUED)
HERCULES INCORPORATED - HATTIESBURG, MISSISSIPPI

OTHER COMMENTS:

Signature: _____

Date: _____

ATTACHMENT B

NON-STORM WATER DISCHARGE EVALUATION AND CERTIFICATION

NON-STORM WATER DISCHARGE EVALUATION AND CERTIFICATION
HERCULES INCORPORATED
HATTIESBURG, MISSISSIPPI

Outfall	Date of Evaluation	Method Used to Test or Evaluate Discharge	If Evaluation is Impossible, Give Reason	Is Non-Storm Water Being Discharged?	List Likely Sources of Non-Storm Water Discharges	Person(s) Who Conducted the Test or Evaluation
SW001	4/3/96	Visual Inspection	-	No	-	Pollution Prevention Manager or Responsible Designee
SW002	4/3/96	Visual Inspection	-	No	-	Pollution Prevention Manager or Responsible Designee
SW003	4/3/96	Visual Inspection	-	No	-	Pollution Prevention Manager or Responsible Designee
SW004	4/3/96	Visual Inspection	-	No	-	Pollution Prevention Manager or Responsible Designee
SW005	4/3/96	Visual Inspection	-	No	-	Pollution Prevention Manager or Responsible Designee

I certify under penalty of law that the above information is, to the best of my knowledge and belief, true, accurate, and complete (see permit Part V.G.).

A. Name & Official Title (type or print)	B. Area Code and Telephone Number
GERALD BURCH PLANT MANAGER	601 545 3450
C. Signature	D. Date Signed
Gerald Burch	4/15/96

ATTACHMENT C

INSPECTION REPORT AND CERTIFICATION FORM FOR SWPPP EVALUATION

Part VII.

Inspection Report and Certification Form For Storm Water Pollution Prevention Plan Evaluation

SARA Storm Water General NPDES Permit No. MSR11 __ __ __ __
(Fill in your Certificate of Coverage Number)

(Please Print)

Owner and/or Operator: _____

Facility Name: _____

Facility Location: _____

Date and Time: _____

Inspector(s): _____

Date of Last Rainfall: _____ Estimated Amount: _____

Deficiencies Noted During the Inspection (attach additional sheets if necessary):

_____

_____

_____

Corrective Action Needed (attach additional sheets if necessary):

_____

_____

_____

Corrective Action Compliance Schedule:

_____

Based upon this inspection which I or personnel under my direct supervision conducted, I certify that all pollution control measures are adequate and have been implemented and maintained, except for those deficiencies noted above, in accordance with the Storm Water Pollution Prevention Plan filed with the Office of Pollution Control and good engineering practices as required by the above referenced permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

I further certify that the Mississippi Office of Pollution Control has been notified of any changes pertinent to our storm water permit as required in Part II.C.

_____	_____	_____
Authorized Name (Print)	Signature	Date

These reports shall be submitted annually, as required in the permit, to:

Chief, Industrial Branch
Office of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385

ATTACHMENT D

RECORD OF AMENDMENTS TO SWPPP

RECORD OF AMENDMENTS TO STORM WATER POLLUTION PREVENTION PLAN
HERCULES INCORPORATED
HATTIESBURG, MISSISSIPPI

DATE OF AMENDMENT	REASON FOR AMENDMENT	SWPPP PAGES, TABLES, FIGURES OR ATTACHMENTS AFFECTED	HERCULES CERTIFICATION *	
			SIGNATURE	DATE

*** Terms of certification are stated in Section 1.0 of SWPPP.**

ATTACHMENT E

RECORD OF DISCHARGES TO STORM WATER

RECORD OF DISCHARGES TO STORM WATER
HERCULES INCORPORATED
HATTIESBURG, MISSISSIPPI

DATE OF DISCHARGE	CONTAINMENT AREA FROM WHICH DISCHARGE WAS RELEASED	STORM WATER DRAINAGE BASIN	NOTICEABLE SHEEN OR ODOR ON WATER?	VALVE CLOSED AFTER DISCHARGE?	APPROXIMATE GALLONS RELEASED	HERCULES REPRESENTATIVE SIGNATURE

ATTACHMENT F

ENGINEERING CERTIFICATION OF SWPPP

Engineering Certification
Storm Water Pollution Prevention Plan
Hercules Incorporated
Hattiesburg, Mississippi

This Storm Water Pollution Prevention Plan (SWPPP) for the Hercules Incorporated (Hercules) chemical plant in Hattiesburg, Mississippi was prepared in accordance with guidelines established in the Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES), Federal regulations 40 CFR Parts 122, 123 and 124, and the State of Mississippi SARA Title III, Section 313 Storm Water General NPDES Permit.

This SWPPP will be modified 1) to reflect changes in design, construction, operation, or maintenance at the Hercules Site which may increase the discharge of pollutants to storm waters, 2) if it is determined by the Hercules Pollution Prevention Manager that the SWPPP is ineffective in controlling storm water pollutants, or 3) to address MDEQ-requested changes to the SWPPP. Modifications to the SWPPP as requested by the MDEQ will be made within 30 days of notification, and Hercules will certify in writing to the MDEQ that the requested changes have been made. Otherwise, any modifications to the SWPPP will be submitted to the MDEQ within 30 days after amendment.

The SWPPP has been and will be reviewed and certified every three years by a Registered Professional Engineer. All certifications will be documented in this Attachment. Such certification does not relieve Hercules of their duty to implement the plan.

CERTIFICATION:

I have examined the Hercules chemical plant in Hattiesburg, Mississippi in relations to Federal regulations 40 CFR Parts 122, 123 and 124, and the State of Mississippi SARA Title III, Section 313 Storm Water General NPDES Permit. I hereby certify that this SWPPP has been prepared in accordance with good engineering practices.

Eco·Systems, Inc.

Caleb H. Dana, Jr.

Caleb H. Dana, Jr.

4/8/96

Date

FIGURES

TABLES

Part VII.

Inspection Report and Certification Form For Storm Water Pollution Prevention Plan Evaluation

DEC 1999

SARA Storm Water General NPDES Permit No. MSR11 _____
(Fill in your Certificate of Coverage Number)

(Please Print)

Formal

Owner and/or Operator: HERCULES INCORPORATED

Facility Name: HATTIESBURG PLANT

Facility Location: HATTIESBURG MS.

Date and Time: 12/07/99 9 30 AM

Inspector(s): CHARLES JORDAN, GARY SHELLEY, RANDY HARVELL, ROGER LADEWIG

Date of Last Rainfall: 11/25/99 Estimated Amount: 0.30"

Deficiencies Noted During the Inspection (attach additional sheets if necessary):

SEE ATTACHMENT

Corrective Action Needed (attach additional sheets if necessary):

SEE ATTACHMENT

Corrective Action Compliance Schedule:

Based upon this inspection which I or personnel under my direct supervision conducted, I certify that all pollution control measures are adequate and have been implemented and maintained, except for those deficiencies noted above, in accordance with the Storm Water Pollution Prevention Plan filed with the Office of Pollution Control and good engineering practices as required by the above referenced permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

I further certify that the Mississippi Office of Pollution Control has been notified of any changes pertinent to our storm water permit as required in Part II.C.

WALTER LANGHAM — Authorized Name (Print)

Signature

12/9/99 — Date

These reports shall be submitted annually, as required in the permit, to:

Chief, Industrial Branch
Office of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385

Inspection Report and Certification Form
For Storm Water Pollution Prevention Plan Evaluation
Date : 12/07/99

Outfall 001	No flow, no oils, no oily sheen on water, some silt-in needs to be removed from the outfall.
Outfall 002	No flow, no oils, no oily sheen on water.
Outfall 003	Normal flow for Greens creek, no oils, no oily sheen on water.
Outfall 004	Slight trickle flow due to freeze precautions, no oils, slight spotting of small sheen patches on some water pockets. Outfall needs general housekeeping/ cleaning to remove any small sheen patches.
Outfall 005	No flow, no oils, no oily sheen.

Corrective action outlined for outfalls 001 and 004 will be completed by 1/31/00